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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,290	09/08/2003	Franz Dobesberger	P24080	8684

7055 7590 10/05/2004

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EXAMINER

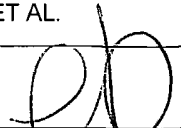
ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/656,290	Applicant(s) DOBESBERGER ET AL.	
	Examiner John J. Zimmerman	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/16/2004 (election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 11-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

OFFICE ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II (claims 1-10) in the reply filed on July 16, 2004 is acknowledged. The applicant cites M.P.E.P. § 803 as a basis for the traversal on the ground that a "serious burden" must be established by the examiner for the restriction to be required. This argument is not found persuasive because the examiner has shown that the required search areas for each of the restricted groups are in different classes (see Restriction Requirement, July 16, 2004). The examiner notes that M.P.E.P. § 803 further states that for "purposes of the initial requirement, a serious burden on the examiner may be *prima facie* shown if the examiner shows by appropriate explanation of separate classification, or separate status in the art, or a different field of search as defined in M.P.E.P. § 808.02. That *prima facie* showing may be rebutted by appropriate showings or evidence by the applicant". In view of the fact that applicant merely states that no serious burden would exist and has not made any "showings of evidence" that the search burden in the different classes would not be undue, the traversal is not convincing. The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. It should be noted, however, that no certified translation

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of the priority document has been received and therefore the priority document cannot be used to predate prior art.

Information Disclosure Statement

3. The Information Disclosure Statement filed with this application has been considered.

An initialed form PTO-1449 is enclosed.

Specification

4. The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper (e.g. see paragraph [0014] of the specification). Applicant is required to delete the incorporation or to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Rejections - 35 USC § 112, First Paragraph

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. Independent claim 1 recites that abutting areas of adjacent bubbles form "particle-containing" interstructures (e.g. see claim 1, lines 5-6). A review of the applicant's specification (e.g. paragraph [0034]) does not cast light on what these particles are, how they originated or how they become part of the "particle-containing" interstructure. The disclosure lacks sufficient description to enable one skilled in the art to perform the method steps of the claims.

Claim Rejections - 35 USC § 112, Second Paragraph

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 1 recites the limitation "particle-containing" in line 5. There is insufficient antecedent basis for this limitation in the claim because the claim makes no prior reference to the origin of this particle. It is not clear from the prior claim recitations as to where the particle originates.

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Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Dobesberger (U.S. Pub. No. 2003/0005793).

12. Dobesberger '793 (different inventive entity) discloses introducing gas into a molten metal and solidifying the foamed metal in a mold using the gas feed pipe structure of Dobesberger - U.S. Pub. No. 2003/0047036 (e.g. see paragraph [0016]). The foamed metal includes particles in the melt (e.g. see paragraphs [0026]-[0028]) and the particles are included in the metal matrix material wall between the adjacent bubbles of the foam. Dobesberger '036

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(different inventive entity), clearly shows that new nozzles comprising similarly dimensioned spaced projecting pipes can be used to form foamed metal having uniformly sized bubbles (e.g. see Figure 3).

13. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Fuerst (U.S. Pub. No. 2004/0093987).

14. Fuerst discloses introducing gas into a molten metal and solidifying the foamed metal in a mold using the gas feed pipe structure having multiple similarly dimensioned spaced pipes (e.g. see Figures 1 and 2; paragraphs [0021]-[0022]). The foamed metal includes particles in the melt (e.g. see paragraph [0017]) and the particles would be included in the metal matrix material wall between the adjacent abutting bubbles of the foam.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linke (Canadian publication 2,084,038) in view of Dobesberger (AT 410104).

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17. Linke discloses forming bubbles in molten metal by introducing gas through a plurality of small nozzles in the manner of a nozzle comb (e.g. see page 6, lines 28-34; Figure 1). Linke includes stabilizing particles of refractory material in the melt (e.g. see page 3, lines 6-10) and therefore particles would be included in the metal matrix material between the adjacent bubbles of the foam. Linke also shows solidifying the metal foam and discharging the solid metal foam out of the ingot mold (e.g. see Figure 1). Linke may differ from the claims in that Linke uses a plurality of small nozzles to form the bubbles, but does not describe the nozzles as projecting pipes. Dobesberger, however, clearly shows that new nozzles comprising similarly dimensioned spaced projecting pipes can be used to form foamed metal having uniformly sized bubbles (e.g. see Figure 3). It would have been obvious to one of ordinary skill in the art to use Dobesberger's nozzle configuration as the nozzle configuration used in the process of Linke because Dobesberger discloses that such a configuration leads to a more uniform foamed metal product.

18. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobesberger (AT 410103) in view of Dobesberger (AT 410104).

19. Dobesberger '103 discloses introducing gas into a molten metal and solidifying the foamed metal in a mold (e.g. see claim 1). The foamed metal includes particles in the melt (e.g. see claims 11-14) and the particles are included in the metal matrix material wall between the adjacent bubbles of the foam. Dobesberger '103 may differ from the claims in that Dobesberger '103 discloses the formation of uniformly sized bubbles but does not describe using similarly dimensioned projecting pipes to form the bubbles. Dobesberger '104, however, clearly shows

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that new nozzles comprising similarly dimensioned spaced projecting pipes can be used to form foamed metal having uniformly sized bubbles (e.g. see Figure 3). It would have been obvious to one of ordinary skill in the art to use this nozzle configuration as the nozzle configuration used for the process of Dobesberger '103 because Dobesberger '104 discloses that such a configuration leads to a more uniform foamed metal product.

20. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobesberger (Japanese publication 2003-119526) in view of Dobesberger (Japanese publication 2003-112253).

21. Dobesberger '526 (different inventive entity) discloses introducing gas into a molten metal and solidifying the foamed metal in a mold (e.g. see claim 1). The foamed metal includes particles in the melt (e.g. see claims 11-14) and the particles are included in the metal matrix material wall between the adjacent bubbles of the foam. Dobesberger '526 may differ from the claims in that Dobesberger '526 discloses the formation of uniformly sized bubbles but does not describe using similarly dimensioned projecting pipes to form the bubbles. Dobesberger '253 (different inventive entity), however, clearly shows that new nozzles comprising similarly dimensioned spaced projecting pipes can be used to form foamed metal having uniformly sized bubbles (e.g. see Figure 3). It would have been obvious to one of ordinary skill in the art to use this nozzle configuration as the nozzle configuration used for the process of Dobesberger '526 because Dobesberger '253 discloses that such a configuration leads to a more uniform foamed metal product.

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22. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobesberger (U.S. Pub. No. 2003/0005793) in view of Dobesberger (U.S. Pub. No. 2003/0047036).

23. Dobesberger '793 (different inventive entity) discloses introducing gas into a molten metal and solidifying the foamed metal in a mold using the gas feed pipe structure of Dobesberger '036 (e.g. see paragraph [0016]). The foamed metal includes particles in the melt (e.g. see paragraphs [0026]-[0028]) and the particles are included in the metal matrix material wall between the adjacent bubbles of the foam. Dobesberger '036 (different inventive entity), clearly shows that new nozzles comprising similarly dimensioned spaced projecting pipes can be used to form foamed metal having uniformly sized bubbles (e.g. see Figure 3). It would have been obvious to one of ordinary skill in the art to use this nozzle configuration as the nozzle configuration used for the process of Dobesberger '793 because Dobesberger '793 discloses to use the gas feed pipe structure of Dobesberger '036.

Conclusion

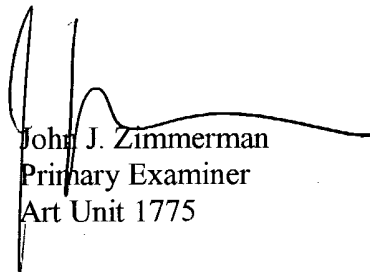
24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited references serve to further establish the level of ordinary skill in the art at the time the invention was made.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547.

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The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
September 30, 2004